1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

power as its chief limiting factor. Attention was being given to the increase and improvement of livestock, a major asset of the country; Ayrshire and Friesian bulls were imported and distributed, rams from a selected herd were sold to reliable farmers, laboratory work on wool was carried out. Yet other lines of progress were dairying, with experiments in cheese production, the breeding of improved mules and donkeys, the increase of egg production by improving poultry breeds. The allotment by the Development Board for the period 1951–6 was nearly 2 million dinars for agricultural research, 3½ million for small-scale reclamation schemes, 1¼ million for animal husbandry, and a million for swamp reclamation. The need for a measure of integration between animal husbandry and crop production, hitherto divorced, was realized, as well as the broad essential singleness of the effort which must be made in the fields of agriculture, irrigation, land settlement, rural education, and the provision of capital. It seemed certain as the nineteen-fifties opened that if this effort were made and sustained by public and Government, and in the absence of any general calamity, the prospects for agricultural development in this wide and favoured territory, within the ultimately fixed limits of its river-water and rainfall resources, exceeded those not only of any Middle Eastern country, but of any territory of comparable size elsewhere in the world; the growing of food for less fortunate nations could prove, indeed, to be the main part of 'Iraq's material contribution to humanity.

In the care of its forests not much had yet been accomplished beyond the limits of study, experiment, and the establishment of tree-nurseries; the wide but neglected forest areas (p. 29) of the north still lay untended and unimproved, lacking notably a modern forest code, a staff of trained foresters, and even detailed exploration. Some steps had indeed been taken to provide fire protection and to carry out by helicopter and air photography the first forest surveys, but few to prevent uncontrolled cutting, grazing, and trespass by the villagers. One million dinars were allotted by the Development Board for forestry development in 1951–6. The significance of these areas to soil erosion, silt deposit, and river flooding was understood, and plans were being prepared on these and allied matters; but only a beginning had been made to solve these problems or to move towards the large-scale action which must be involved, or to provide the 'Iraqi public with sources of fuel and timber at present lacking.

Although sea fishing, based on the Shaṭṭ al-'Arab, was but a limited resource, the rivers and swamps of the territory were the source of a fish catch estimated at many thousands of tons a year, and export of fish to the Levant—and in particular to the Jews in

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

Palestine—was common from 1932 until the mid-war period. It was probable that, with research and the establishment of a responsible authority not hitherto created, present production could be largely increased. Fishery development had in 1948 found its way into ministerial programmes; a trawler for use in the Shaṭṭ al-'Arab approaches was delivered in 1950, and a fish store was projected by the Agricultural Bank.

The history of 'Iraq's irrigation from 1946 to 1950 is one of rapid approach to, or even the partial realization of, prospects long desired and, through new-found wealth, by 1951 fully practicable. The call for heroic measures was the clearer since the disastrous floods of 1946 and 1948 and the acute grain shortage—in a territory of fabulous potential output!—in the latter year; and in 1946 the resources of the highly competent Irrigation Department were supplemented *ad hoc* by the appointment of a well-staffed Irrigation Commission under F. F. Haigh of the Indian Service of Engineers. Its object was to study and report on river control and irrigation, and to submit a programme. The Commission reported in June 1949.

The task of flood control and storage was to be carried out on the Euphrates by a completed and extended Ḥabbaniya–Abu Dibis project: on the Tigris, by the grandiose Wadi Tharthar project (in two stages), by the 'Gibraltar' dam on the Diyalā at its point of passage through the Jabal Ḥamrin, and by the Dukan dam on the Lesser Zab. These works, all pronounced practicable, would save 'Iraq from floods and would greatly increase its low-season resources. They would be accompanied by the development of irrigation in new areas by canals, headworks, barrages, and feeders on the middle Euphrates, the lesser Zab, the middle Tigris (in the areas commanded by the Ishaqi and Nahrwan canals), on the Diyalā river, and on the Gharraf and lower Tigris. Drainage was to be taken comprehensively in hand in both existing and projected irrigated areas, on lines which experiments made from 1940 to 1946 had shown to be practicable. Hydro-electric power was to be developed at the Samarrā headworks, the Wadi Tharthar outlet channel, and the Gibraltar and Dukan dams. Plans for the reclamation of the southern 'Iraqi swamps, and the re-formation of the lower Tigris, were suggested but not formulated. Of this gigantic programme, expected to cost some ID 90 million, about a quarter of the whole was to be undertaken immediately and finished within ten years: it would include the first part of the extended Ḥabbaniya and of the Wadi Tharthar schemes, the Gibraltar dam, drainage work, and the extension of existing irrigation in the Nahrwan and Gharraf areas and on the Euphrates. A large part of these plans was adopted by the Development

35c Hooper and Field S-5 (1934) 1937 MAI Iran MAI
Iraq MHI

I-I
824*
278*

Anacyclus Pyrethrum DC. (Compositae)

عاقر قرحا

Agirgarhā (Teh., Isf.); Akalkara (Hind.); pellitory of Spain; the root.

Field 410; W.H.M.M. 150791.

Pellitory root, obtained in northern Africa, is nearly cylindrical in shape, tapering near the tip, with a tuft of hairs or the remains of leaves toward the crown. When chewed the drug has a pungent taste, exciting a flow of saliva.—It is prescribed for toothache (H.F.).

Anamirta paniculata Coleb. (Menispermaceae)

مرک ماهی

Marg-i-māhī, "fish poison" (Teh.); Zahar (Iraq); the berries.

Field 138, 101 (Iraq); W.H.M.M. 150746.

Cocculus indicus or Levant berries are yielded by a shrub indigenous to eastern India and the Malay Archipelago. The fruits are round or kidney-shaped, dark brown without, each containing a white seed with oily, bitter endosperm. The power possessed by the fruits, when thrown into water, of stupefying fish has long been known, and is due to the poisonous crystalline principle, picrotoxin, in the seed. The berries are used in the East for poisoning dogs and fish and for making ointments to destroy pediculi on the skin.

[226]

Anthemis Wiedemanniana Fisch. & Mey. (Compositae)

گل بابونه

Gul-i-bābūna (Ham.); flower heads.

Achundow; Ait.; Post; Schl.; Boiss. 2: 286; Pharmacog. 346; Ph. Ind. 2: 275; I.H.B.

K.B. 303.

Banoi is probably a contraction of Bābūna or Babunaj, a name for camomile and other medicinal composites, including the above.

Irani camomile flowers are generally obtained from *Matricaria Chamomilla* L. (q.v.).

Apium graveolens L. (Umbelliferae)

تخم کرفس

Tukhm-i-karafs (Teh.); Buzz-ul-karaphs (Ar.); Asil-a-krasb (Afg.); Karafs (Iraq); Ajmud (Hind.); Udasaliyun (Gr.); wild celery fruits.

35a Hooper and Field S-5 (1934) 1937 MAI Iran MAI
Iraq MHI

I-I
824*
278*

Verbascum Thapsus L. (Scrophulariaceae)

ماذريون

Māzaryūn (Teh.); Mahi zahraj, Bon tamaku (Ar.); Gidar tamaku (Hind.); great mullein.

W.H.M.M. 150758.

This mullein grows from the temperate Himalayas westward to Britain. The drug consists of broken stalks and thick, hairy leaves. The narcotic action of mullein on fish appears to be well known to the Arabs and Iranis, the meaning of Mahi zahraj being "fish poison." Mohammedan physicians prescribe it in gout and rheumatism in combination with aperients. Throughout Europe mullein has long had a reputation in the pulmonary diseases of cattle, on which account it bears the name of cow's lungwort.

• [226]

824*
278*
302

Vetiveria zizanioides Stapf (*Andropogon muricatus* Retz) (Gramineae)

برمکیا

Barmakiyā, Bikh-i-wala (Pers.); Khas Khas (Hind.); Izkhir-i-jami (Ar.); Vetiver (Tam.); root of cuscus grass.

Field 5 (Isf.).

[355]

The use of these fragrant, wiry roots for medicinal purposes and in perfumery has been common in India for a long time. The roots emit a pleasant odor when moist, and for this reason they are woven into screens and mats (tatties) which hang over doors and windows to cool and perfume the atmosphere during the hot season. A paste of the root is applied to the skin to relieve oppressive heat of the body, and a cooling aromatic bath is prepared by adding some broken root to the water. The root yields a fragrant essential oil which commands a high price as a perfume (Otto Stapf, *Kew Bulletin*, 1906, 347–349).

824*
278*
262
246

Vicia Faba L. (Leguminosae)

باقله

Bāghalā (Iraq); Banklent (Bal.); Bakla (Hind.); Baqilla, Baqlah (Turk.); Paglah (Kurd.); broad or horse bean.

Field 4, 56, 69 (Iraq).

This legume is a native of Iran and is now universally cultivated. The beans are a well-known vegetable and an excellent horse food. The shoots are said to be efficacious in rousing a drunkard from

241 tables in season. Citrus fruits flourish in the irrigated areas of Kerbela province and in the Diyala river valley, while grapes, apricots and other fruits grow in various localities. Numerous species of dates are cultivated, especially in the Shatt al Arab and lower Euphrates basins: they represent one of the basic foods of the people.

511 The financial circumstances of most families prohibit the consumption of meat,
233 except at irregular intervals. Sheep and goats are raised in large numbers, both by the settled and the nomadic peoples, and constitute the principal sources of
226 meat. Fish are a valuable food among
231 the peoples living in the river valleys and along the coast. Fowl are kept in the rural
262 villages. Milk is a standard article of diet
334 wherever it is obtainable. The milk of sheep or goats is most widely used, but that of cows, water buffaloes and camels is utilized in many areas. Milk is normally consumed in the form of buttermilk or a soured milk product, known as *leban*. Cheese is also made, but it is rarely as popular as in other Arab countries. Clarified butter and the fats derived from the tail tissues of the local breeds of sheep are important sources of fat among all population groups.

262 The least diversified diets are probably found among the nomadic tribes, who subsist on the products of their herds, supplemented by dates and wheat or barley breads. Camel's milk is employed by the
[234] nomadic Bedouin. The tribal Arabs of the southern marshes depend largely upon the milk of the water buffalo, fish and wild waterfowl, rice and occasional edible rushes.

146 Measures to raise the standards of nutrition among the various urban and rural groups are being studied by educational and
165 health authorities. Improper feeding in in-
853 fancy, particularly in the course of weaning, which is often deferred until the second year of life, is a factor contributing to the
146 high mortality among young children. The
657 organization of a national nutrition committee, to function in an advisory capacity to the governmental agencies concerned, and